

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P630073

Luminaire Tested: GWS-SA1C-830-U-T2-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P630073  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-20)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1C-830-U-T2-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

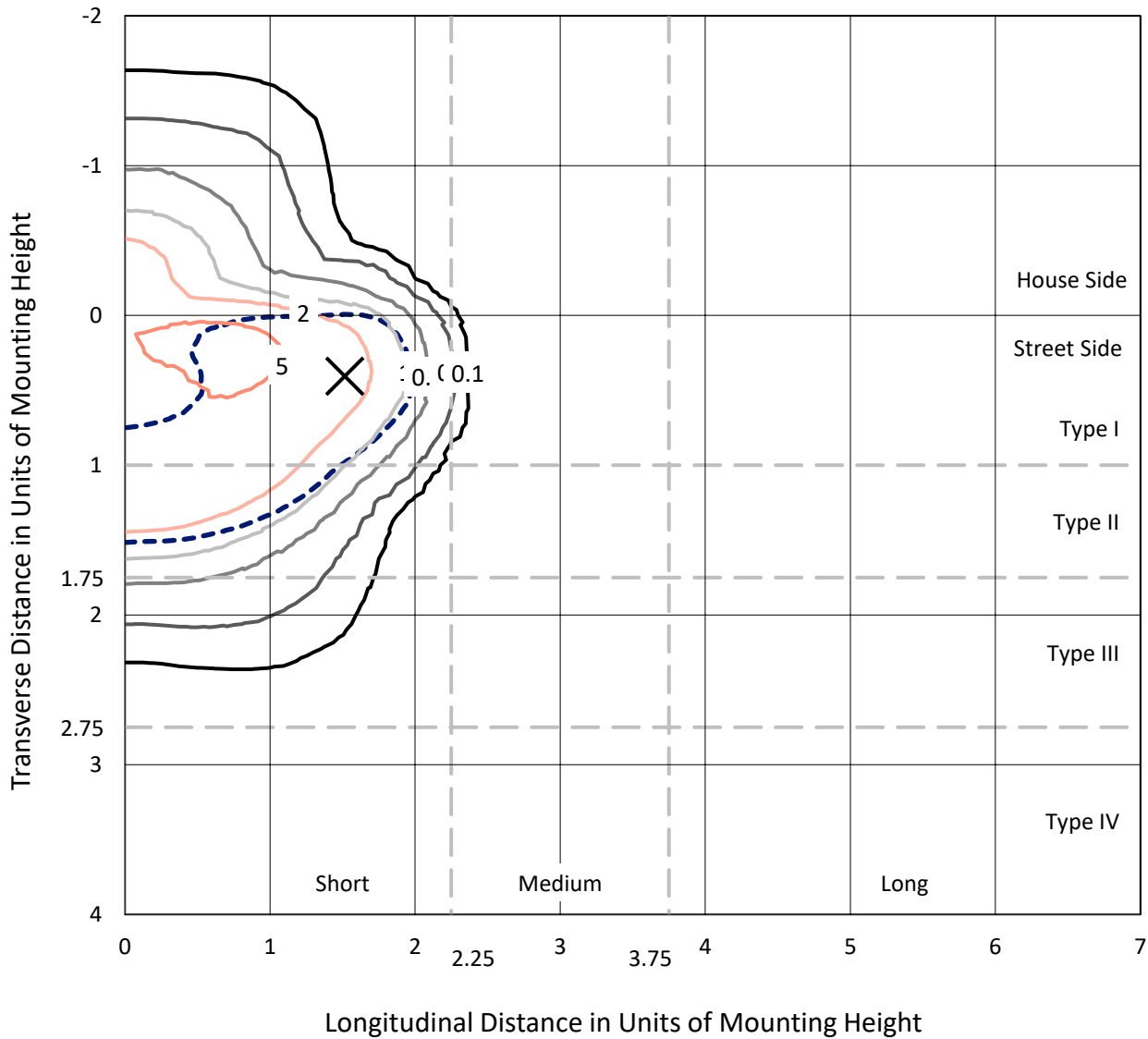
Lumens per Lamp: N/A  
Luminaire Lumens: 2268.1 lumens  
Efficiency: N/A  
Efficacy: 66.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G0  
  
Input Watts (W): 34.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 0  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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 CATALOG NUMBER: GWS-SA1C-830-U-T2-W-GRSBK

### Iso-Footcandle Lines of Horizontal Illumination

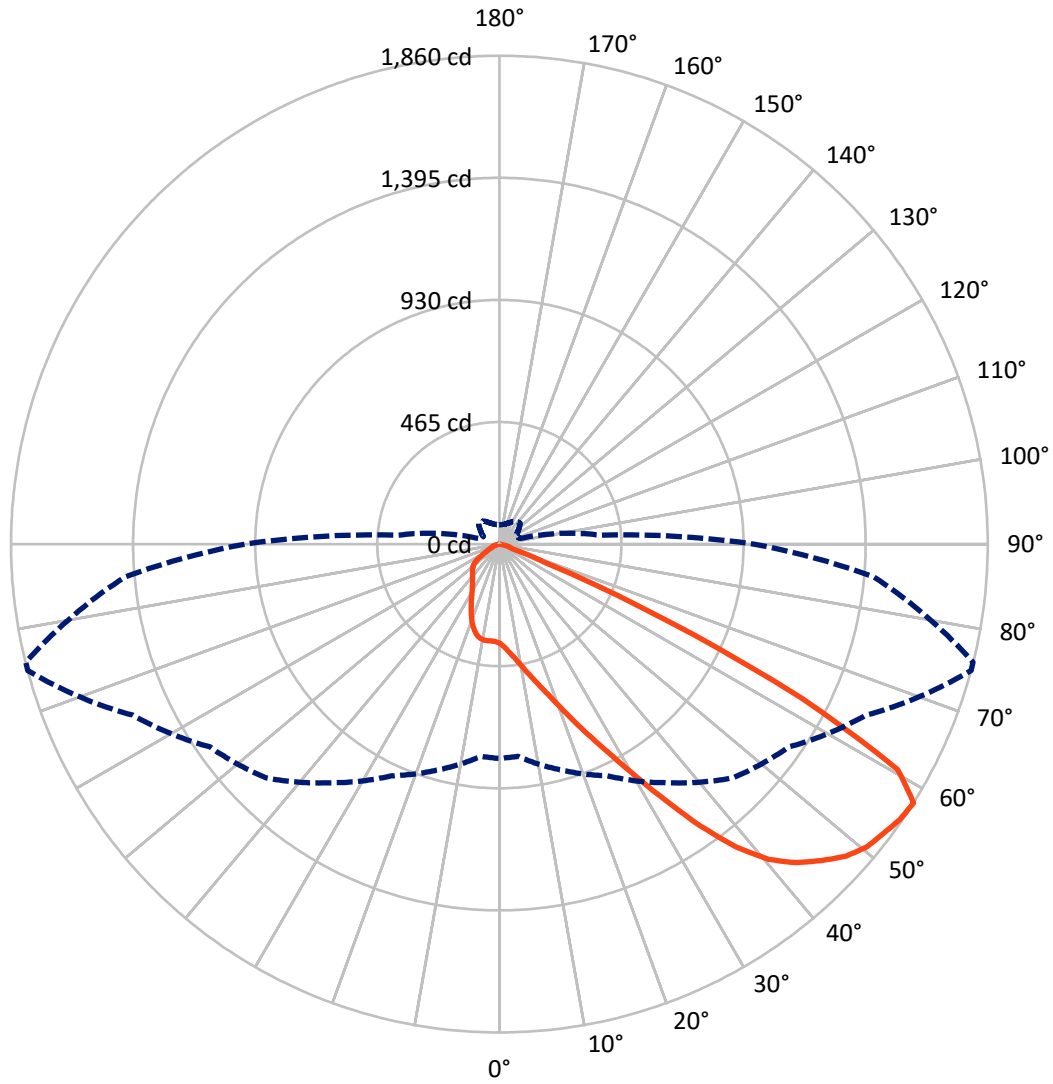
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.1 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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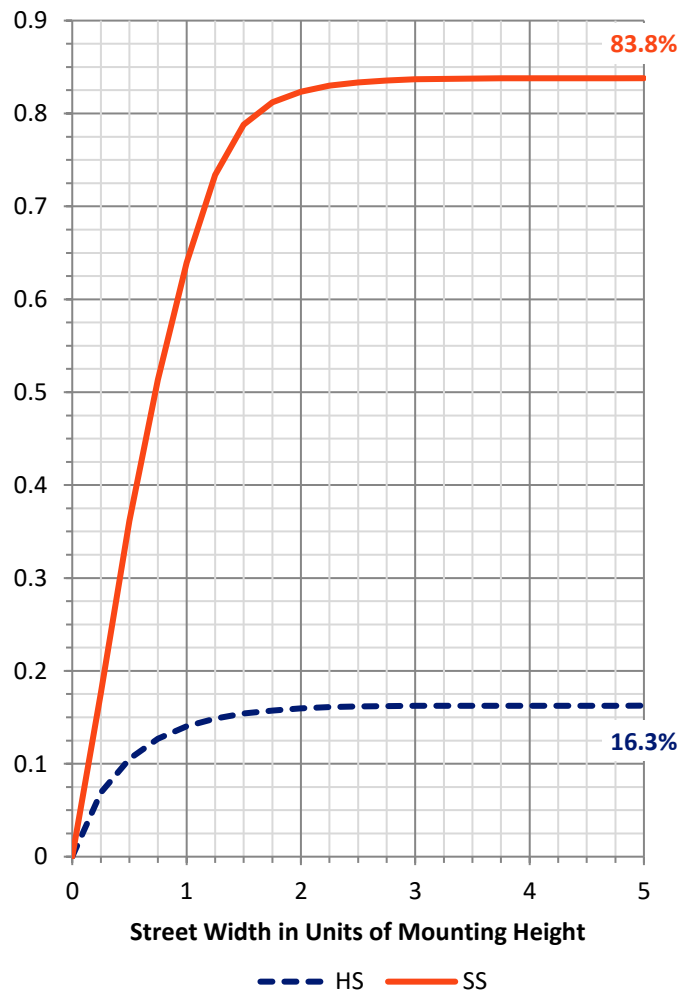
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	370.5	0.0	370.5
	% Fixture	16.3	0.0	16.3
<b>Street Side</b>	Lumens	1897.6	0.0	1897.6
	% Fixture	83.7	0.0	83.7
<b>Total</b>	Lumens	2268.1	0.0	2268.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.5	1.7
10°-20°	125.0	5.5
20°-30°	229.0	10.1
30°-40°	379.9	16.8
40°-50°	580.2	25.6
50°-60°	652.0	28.7
60°-70°	240.5	10.6
70°-80°	23.0	1.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	2268.1	100.0
0°-180°	2268.1	100.0

**Coefficient of Utilization**



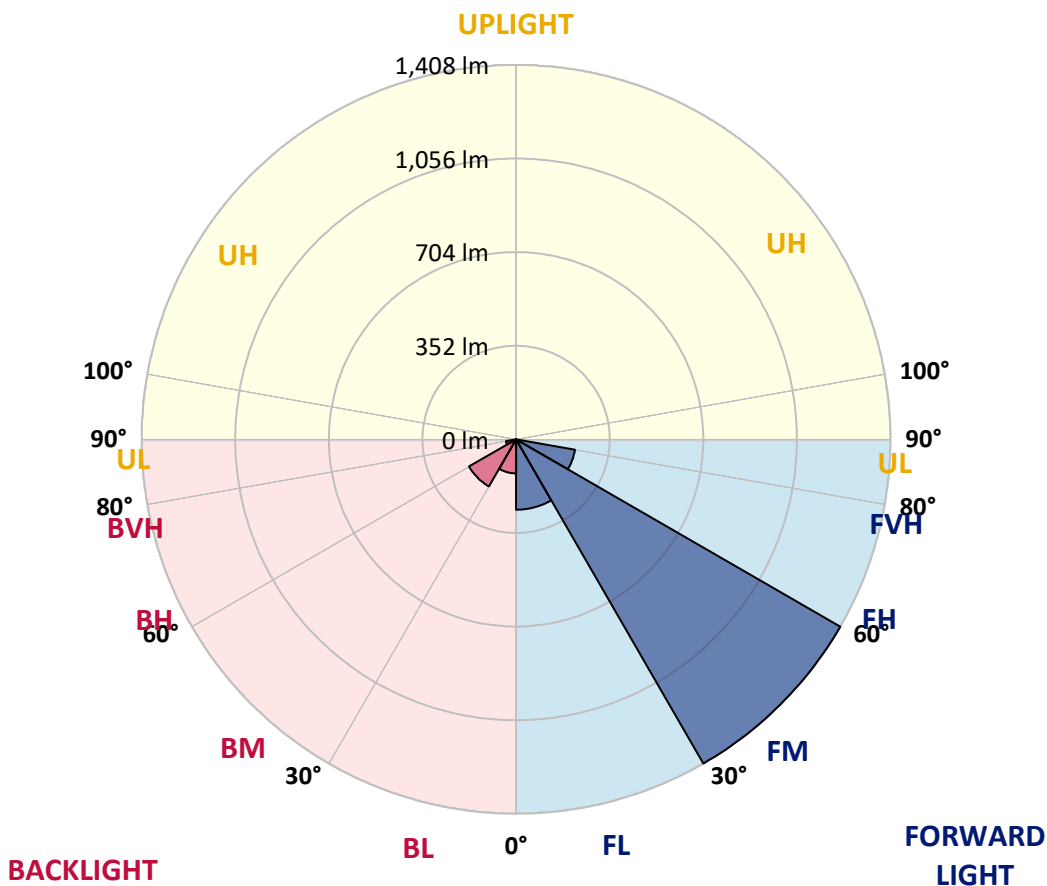
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	264.7	11.7			
FM (30°-60°)	1407.9	62.1			
FH (60°-80°)	225.0	9.9			G0/660
FVH (80°-90°)	0.0	0.0			G0/10
BL (0°-30°)	127.8	5.6	B1/500		
BM (30°-60°)	204.2	9.0	B0/220		
BH (60°-80°)	38.5	1.7	B0/110		G0/110
BVH (80°-90°)	0.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G0**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3
2.5°	422.6	427.0	425.6	422.9	421.3	415.5	412.0	401.6	394.2	393.3	386.5
5°	476.0	475.2	474.1	470.8	468.1	459.0	448.4	430.8	415.2	413.3	398.8
7.5°	505.3	505.8	506.4	505.8	503.9	497.1	485.3	464.8	441.0	439.3	416.3
10°	517.3	518.4	521.2	526.4	531.0	530.5	523.6	502.6	473.3	470.5	439.6
12.5°	523.1	524.5	528.8	538.7	551.3	561.1	562.2	543.3	511.0	506.7	467.2
15°	531.0	532.4	537.9	550.7	569.1	588.5	601.1	589.1	552.9	548.3	497.6
17.5°	534.6	536.5	544.4	561.4	585.2	615.1	643.5	642.4	602.5	598.9	532.9
20°	541.4	542.8	549.9	568.3	597.0	640.0	687.9	705.1	663.0	657.8	575.6
22.5°	563.1	563.6	566.9	578.4	605.2	658.0	733.0	778.2	734.4	727.6	623.5
25°	598.4	598.1	599.5	601.4	621.1	676.4	776.6	860.6	816.2	808.9	677.7
27.5°	643.3	643.3	646.5	641.1	649.0	699.1	819.5	955.3	911.5	901.1	737.1
30°	696.1	695.8	703.5	694.7	697.2	735.0	865.8	1058.5	1026.5	1013.6	805.6
32.5°	767.8	766.2	774.9	762.9	754.7	789.1	922.2	1166.3	1164.2	1144.4	891.5
35°	858.4	855.7	858.4	846.6	831.8	865.0	996.1	1273.9	1316.9	1296.1	993.9
37.5°	948.5	957.2	960.2	940.0	927.9	961.0	1085.0	1370.3	1462.8	1441.2	1100.4
40°	1054.7	1051.9	1062.3	1039.6	1031.9	1068.6	1172.1	1442.0	1578.3	1557.8	1195.1
42.5°	1132.9	1137.9	1150.7	1138.1	1132.1	1166.6	1245.2	1483.9	1658.5	1638.2	1262.7
45°	1226.8	1230.4	1235.3	1224.9	1218.6	1252.6	1298.0	1502.2	1719.5	1697.6	1308.1
47.5°	1328.4	1331.1	1331.1	1309.8	1289.5	1303.5	1333.3	1512.6	1775.7	1754.6	1341.8
50°	1401.2	1402.6	1414.6	1399.6	1355.5	1333.9	1349.5	1522.7	1812.9	1793.2	1352.7
52.5°	1336.6	1335.0	1374.6	1405.8	1417.6	1374.6	1377.4	1537.5	1830.9	1814.0	1361.5
55°	1125.6	1122.8	1178.7	1254.5	1358.2	1413.2	1411.1	1546.3	1850.9	1840.5	1393.3
57.5°	816.0	811.3	889.1	973.4	1109.4	1258.6	1346.2	1541.3	1859.7	1858.9	1430.2
60°	490.5	486.7	560.0	648.7	753.8	903.8	1049.2	1380.7	1742.5	1744.2	1334.1
62.5°	301.9	305.5	371.7	416.9	456.0	501.2	585.2	928.7	1290.9	1301.6	937.5
65°	203.1	205.8	267.2	324.1	324.1	265.0	227.5	444.0	688.7	670.6	443.4
67.5°	136.3	139.3	187.8	254.3	263.9	184.8	92.2	132.5	191.9	186.1	109.8
70°	80.2	83.5	125.1	174.4	192.2	128.7	61.6	56.1	54.5	52.8	42.7
72.5°	35.9	37.2	63.8	88.7	81.0	54.2	43.5	44.9	42.4	41.6	34.8
75°	10.9	11.5	16.4	19.2	19.4	19.4	26.3	35.3	33.4	33.7	26.8
77.5°	2.7	2.7	4.4	4.1	2.2	1.9	4.9	7.9	8.2	7.4	5.5
80°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P630073

CATALOG NUMBER: GWS-SA1C-830-U-T2-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3
2.5°	383.5	376.4	371.7	365.1	360.5	355.6	351.2	347.6	345.7	345.2	345.4
5°	392.2	381.0	370.1	357.5	348.7	340.5	333.9	328.7	326.3	325.5	325.5
7.5°	405.7	390.1	370.6	350.9	336.1	323.3	315.6	309.9	307.7	307.1	305.5
10°	423.2	401.8	369.8	339.1	318.3	304.9	299.5	297.8	298.6	298.9	298.6
12.5°	444.3	414.1	364.6	321.9	299.5	291.2	291.8	296.2	301.1	303.6	304.1
15°	466.7	425.4	352.8	301.4	283.3	283.0	291.0	301.1	310.7	314.8	315.9
17.5°	491.9	434.4	334.8	279.5	269.3	277.3	291.5	307.1	320.0	326.8	328.2
20°	519.5	441.8	311.8	258.9	257.0	271.3	291.0	310.1	326.0	333.7	335.0
22.5°	548.3	447.0	285.2	240.1	245.8	264.4	285.8	304.4	319.4	328.2	329.3
25°	581.1	447.5	258.1	224.2	235.4	255.1	273.2	288.5	301.1	308.8	309.6
27.5°	609.9	441.0	234.0	211.3	225.8	243.6	255.7	264.1	272.9	277.3	277.6
30°	643.0	429.5	211.3	200.9	216.0	229.4	235.4	237.3	238.1	239.0	237.9
32.5°	682.4	415.5	194.3	190.8	204.7	213.8	215.4	211.6	206.9	200.4	198.7
35°	730.8	402.9	180.4	180.9	192.4	197.9	196.5	188.3	179.3	171.4	170.0
37.5°	783.4	392.2	169.7	171.4	179.0	182.8	178.7	169.7	165.6	158.8	159.0
40°	829.9	383.5	160.1	161.8	165.3	168.9	162.3	156.3	164.0	163.4	164.0
42.5°	863.1	376.1	151.9	151.1	153.6	156.0	151.1	148.1	161.0	157.4	159.3
45°	882.5	369.3	145.1	140.1	144.0	148.4	145.1	141.2	145.6	129.2	127.8
47.5°	895.6	365.4	139.1	129.5	136.3	144.0	137.1	127.8	121.5	107.3	106.2
50°	897.0	363.5	131.9	118.5	127.3	135.5	127.6	114.7	105.7	99.4	98.5
52.5°	904.1	367.3	122.1	104.6	114.1	127.3	121.8	108.9	96.6	91.2	90.1
55°	935.9	383.5	105.7	85.4	99.4	121.0	117.2	97.2	85.4	82.1	81.3
57.5°	968.7	386.8	83.2	67.6	86.5	112.0	107.0	89.5	78.0	74.2	73.4
60°	885.8	318.6	62.4	55.8	76.4	103.5	99.1	84.9	71.4	66.8	66.0
62.5°	581.9	172.2	49.5	47.4	64.3	87.6	90.3	76.6	63.8	58.9	58.6
65°	268.3	79.9	38.0	37.5	50.4	69.8	77.7	67.1	53.9	49.5	49.5
67.5°	73.1	39.7	29.8	27.6	34.2	46.8	56.7	50.1	38.3	33.1	32.8
70°	36.4	32.0	26.8	23.8	24.6	29.0	33.4	27.9	19.4	15.9	15.6
72.5°	29.8	26.3	22.7	20.3	18.6	17.8	17.2	14.0	9.0	6.8	6.6
75°	22.2	18.9	16.1	13.1	11.2	10.4	9.3	6.8	3.8	2.2	1.9
77.5°	4.9	4.7	4.4	3.3	3.0	2.5	1.9	1.4	0.5	0.0	0.0
80°	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2408-195-9  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 08/07/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: MCGRAW EDISON  
 Catalog Number: **GALN-SB1A-830-U-5WQ**  
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

**Spectral Parameters**

CCT (K): 3050  
 CIE u': 0.2476  
 CIE v': 0.5251  
 Duv: 0.0034  
 CIE x: 0.4383  
 CIE y: 0.4131  
 CIE z: 0.1487  
 Peak Wavelength (nm): 603  
 Dominant Wavelength (nm): 581  
 Purity: 55.55201  
 Rf: 81.5  
 Rg: 99.2

CRI (Ra):	81.0		
R1:	79.6	R9:	7.1
R2:	85.6	R10:	67.0
R3:	92.0	R11:	82.7
R4:	82.6	R12:	63.2
R5:	78.9	R13:	80.3
R6:	81.7	R14:	95.0
R7:	85.2	R15:	71.7
R8:	62.0		



**Test Conditions**

Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.27**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 2.32**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

**Summary**

$R_f = 81.5$   
 $R_g = 99.2$   
 $CIE R_a = 81.0$   
 $R_9 = 7.1$



**Color Vector Graphics**





**Individual Sample Fidelity Index ( $R_{f,i}$ )**

CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)